

# QTC50

Omni High Definition  
Microphone™  
for Quiet Sources

## User's Guide

### Warranty

All Earthworks products (except accessories) carry a fifteen-year limited warranty (parts and labor).

### Product Registration

To help you get the most out of your Earthworks purchase, please take a moment and register your product with us online at [earthworksaudio.com/register](http://earthworksaudio.com/register).

### Service & Repair

If you have any problems with your Earthworks products, please contact our Service & Repair Department.

Email: [returns@earthworksaudio.com](mailto:returns@earthworksaudio.com)

Telephone: (603) 654-2433, ext. 119



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 **Earthworks®**  
HIGH DEFINITION MICROPHONES™

## Description

The Earthworks QTC50 is an omnidirectional (pressure) pre-polarized condenser microphone directly coupled to a dedicated wideband, low output impedance preamplifier. The QTC50 requires a standard 48V phantom power supply. It features an extended linear free-field frequency response from 3Hz to 50kHz, extremely fast impulse response, low self-noise, very low handling noise, uniform polar pattern, and high SPL handling capabilities. It exhibits no proximity effect.

Each microphone is delivered with its own calibration chart providing the individually measured frequency response curve. A mounting clip is included with the microphone.

## Applications

The Earthworks QTC50 is easy to operate. Connect the microphone to a microphone preamplifier supplying 48V phantom power using a standard XLR microphone cable. Please allow up to one minute for the microphone to settle. Plugging in the microphone "hot" (phantom power already present at the input) will not damage the microphone, and is actually preferred for faster settling. It is normal for any phantom powered mic to "pop" when plugged in or powered up. Make sure to mute the signal to speakers or headphones when phantom power is first applied.

The QTC50 is a premium microphone designed for recording quieter sources such as vocals, strings, woodwinds, and distant-miked orchestras or choirs. For classical location recording a matched pair will provide spectacular results. The QTC50 will faithfully reproduce sound with impeccable detail and does not exhibit the typical problems and limitation exhibited with conventional microphones. Its impulse response and diaphragm settling time is extraordinary, resulting in the most pure and uncolored sound.

This microphone has no removable parts.

## Care of Microphone

The Earthworks QTC50 High Definition Microphone™ is a precision instrument designed and built to provide years of top performance. Following these simple rules will help to protect your investment in the QTC50:

- Avoid touching the front protective screen.
- Never attempt to disassemble the microphone – it cannot be opened.
- Avoid extreme heat and condensing humidity. Allow the microphone to warm up in the case when bringing it in from the cold weather.
- Rough handling may damage the microphone even if no visible marks are left.
- When not in use keep the QTC50 in its case.

## Specifications

Frequency response: 3Hz to 50kHz +1/-3dB

Polar Pattern: Omnidirectional

Sensitivity: 30mV/Pa (Typical)

Power Requirements: 48V Phantom, 10mA

Peak Acoustic Input: 142dB SPL

Output: XLR-3

Output Impedance: 100Ω, balanced; (50Ω ea. pin 2 & 3)

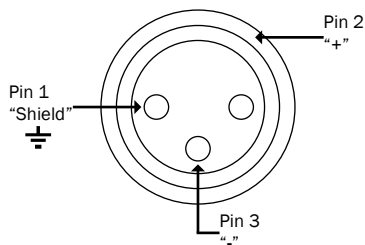
Minimum Load: 600Ω btw. pins 2 & 3

Noise: 22dB, A equivalent

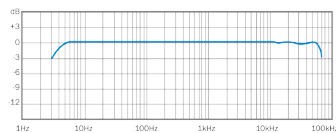
Dimensions L x D: 229 x 22 mm (9 x .860 in.)

Weight: 225g (.5lb)

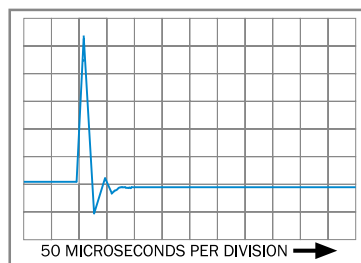
Specifications are subject to change without notice.



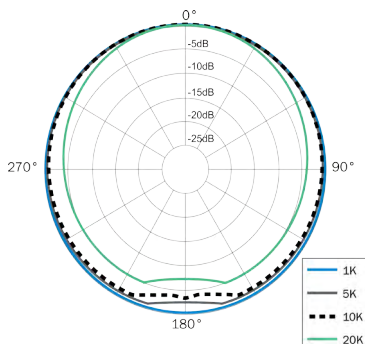
XLR Output Connector Assignment of QTC50



Frequency Response of QTC50 (typical)



Impulse Response of QTC50 (typical)



Polar Response of QTC50 (typical)